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THE ETHICS OF RESOURCE ALLOCATION: THE VIEWS OF GENERAL PRACTITIONERS IN LINCOLNSHIRE, U.K.

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Abstract—Concerns about the intrusion of economic and financial considerations into patient management have increased in the United Kingdom, largely as a result of the passage of the 1990 National Health Services Act. Based on an agenda set by the British Medical Association, a questionnaire was designed to reveal general practitioners' attitudes to potential ethical problems posed by rationing and resource allocation. The questionnaire was issued to each of the 105 practices in Lincolnshire and 70 replies were returned for analysis. The survey revealed that, in certain areas, there existed a wide divergence of opinion amongst physicians. Examples included the extent to which the government was to be held responsible for full health care funding, the legitimacy or otherwise of general practice budgets and the extent to which service provision should be dependent on upon personal remuneration. On the other hand, relatively high degrees of consensus appeared to exist with respect to issues such as rationing by deterrence and service dilution. Additional, qualitative, evidence suggests that practitioners perceive themselves to be under increasing pressure from patient demand and that morale in the profession is falling. The results of the present study appear consistent with those obtained in other countries. In view of recent policy initiatives with respect to public sector health care, it is likely that the debate over the ethical dimensions of resource allocation in the U.K. will become more vigorous. © 1998 Elsevier Science Ltd. All rights reserved

Key words—cost-effectiveness, ethics, general practice, rationing, resource allocation

INTRODUCTION

The British Medical Association (BMA) is the professional association of U.K. physicians and traces its origins back to 1832. Since the formation of its Committee on Medical Ethics in 1849, the BMA has explicitly concerned itself with the "ethical implications of all matters concerning the relationship between the medical profession, the public and the State..." (British Medical Association, 1988, p. v). Naturally, the focus of the BMA's attention within the realm of medical ethics has varied over the years although, since the formation of National Health Service (NHS) in 1948, one particular item has risen to prominence on its agenda. The NHS was intended to make health care available to all at zero or only nominal prices, with most of the costs being met from public funds, principally taxation. Since 1948, patient demands on the NHS have generally out-weighed its capacity to supply, with the result that rationing by means of quantity adjustment (waiting lists for treatment) has emerged. In consequence, a potential conflict between the strictly-finite availability of public health care resources and the "ideal" management of patients from a clinical point of view has become apparent.

In its first formal handbook of medical ethics, published in 1980, the BMA advised its members of two specific duties entailed by the scarcity of NHS resources. First, physicians should "explain the position to the patient" (that is, explain that overall resource constraints may preclude immediate treatment) and offer "an assessment of any medical implications of the delay". Second, "it is clearly the ethical duty of the doctor to use the most economic and efficacious treatment available" (British Medical Association, 1981, p. 39) This second duty is owed to the taxpayer and other beneficiaries of the national health care budget, rather than to the patient *per se* and underlines the need to maximise the simple, technical efficiency of overall resource use in a world of scarcity.

By the next revision of the BMA handbook in 1988 (British Medical Association, 1988), the discussion of the ethical implications of resource allocation had grown from three short paragraphs to three pages whilst, by the third and most recent revision (Sommerville, 1993), the coverage has risen to a chapter of seventeen pages, plus repeated references to the issues throughout the book. Even if judged only in terms of the *quantity* of advice offered by the BMA to practising physicians, it is evident that concern about the consequences of the intrusion of economic and financial considerations into the clinical management of patients has increased dramatically in recent years.

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RE-STRUCTURING OF INCENTIVES

Much of the current concern over the economic aspects of medical ethics has undoubtedly been prompted by the passage of the 1990 National Health Services Act. As a result of this Act, public sector health agencies were divided into financially-autonomous purchasers and providers of health care. The latter effectively gain revenue from selling care services to the former, who receive pre-specified and cash-limited budgets from the government for this purpose. The flow of care services is therefore accompanied by monetary transactions which are, in turn, governed by contracts. The placing of contracts between purchasers and providers has required the making of explicit judgements about priorities and has also revealed differential demand for different types of service. With constrained budgets, economic considerations become influential in contract placement, particularly in terms of the requirement for purchasers to obtain "value for money" (CM 555, 1989, p. 7). Moreover, each autonomous agency is now obliged to satisfy two objectives simultaneously, namely, budgetary discipline and proper patient management. The source of concern is that the fulfilment of the former might not necessarily entail the fulfilment of the latter and vice versa.

A potential for conflict between economic and financial objectives on the one hand and that which we might term "ethical health care" on the other, is perhaps most obvious in the case of general practitioners (GPs). Prior to 1990, GPs were largely insulated from many of the ethical problems posed by resource allocation issues, because they were subject to relatively few financial responsibilities or constraints in respect of the care services which they offered. Most of their service costs, including the employment of labour and rentals on accommodation, were funded by statutory health authorities. In the case of prescribed drugs, certain limitations existed with respect to the range of drugs which might be prescribed (for example, generic rather than branded medicines on cost or technical efficiency grounds), although, within these limitations, all GP drug costs were met by other agencies rather than by the GPs themselves. If, as the result of a consultation, the GP referred a patient to secondary care, the treatment costs were met by *that* sector and not by the GP. Indeed, the practical management of patients within the principal form of NHS rationing (waiting lists) was actually undertaken by physicians in the secondary care sector, to whom the patients had been referred.

As a result of the 1990 Act, two forms of budget were introduced into general practice. First, larger practices were permitted to hold their own practice budget or fund, from which they were to purchase prescribed drugs and a specified range of services from secondary care providers, such as diagnostic tests and certain inpatient and outpatient treatments. Practices over-spending on the budget risked sanctions in the form of the removal of fundholding status, whilst under-spends could be retained for practice development, at the discretion of the GP partnership. Second, practices not joining the fundholding scheme were set indicative prescribing budgets, requiring them either to constrain their overall prescribing expenditures within pre-specified limits. After 1995, non-fundholding practices making savings on their prescribing budgets were permitted to retain a small percentage for practice development.

Naturally, the imposition of budget constraints provides the GP with a far stronger incentive than before to consider the economic implications of his or her prescribing decisions. More of the prescribing budget spent on one patient means less available for other patients and a lower chance of realising a budget surplus for discretionary use, *ceteris paribus*. For fundholders, the same is also true for hospital referral decisions. Were we to assume that, in the past, the GP had simply offered treatment to all those expressing a need, however small, the current system does not guarantee automatically that sufficient resources will be available to meet *all* needs. Assuming that budgets are binding, GPs are now required to allocate resources between patients on the basis of some notion of merit. Although the criterion of merit has not been established by statute, the presumption must be that "value for money", as noted previously, will form an important element in the resource allocation decision.

Significant as such a change might be, it is not the only new source of ethical tension in the system. In 1990, the same year as the NHS Act was passed, revised terms of service for GPs were imposed by the government. This "new contract" changed the personal remuneration structure of GPs, in a manner intended to be harmonious with the goals of the NHS Act. The White Paper which prefaced the Act (CM 555, 1989) had clearly signalled the intention of reducing progressively the fixed component in GP income, paid independently of the volume of services offered. Instead, an increasing proportion of income was to come from capitation fees (related to the number of patients for which the GP was responsible), target payments (payable according to the GP's degree of success, for example, in recruiting patients to screening or immunisation programmes) and fees-for-service (for example, fees per night visit or for health promotion activity undertaken). A number of specific services were re-designated under remuneration headings. For example, prior to 1990, health promotion was undertaken as part of general medical services and rewarded through average net remuneration. Subsequently, it attracted a fee-for-service, whilst most of the target payment activities were *formerly* fees-for-service. Rural practice payments, based on patient–surgery

distances, are now available to all GPs, no longer simply those in designated "rural" areas (Ellis and Chisholm, 1993). The private incentives facing GPs are therefore changing; put crudely, GPs are being rewarded for effort, rather than for simply "being there".

With increased personal remuneration becoming a stronger function of the nature of services provided, GPs in the U.K. are entering more fully the world of "split preference systems" (Margolis, 1982). Their objective functions embody a set of imperatives pertaining to the patient group for which they are responsible and a further set pertaining to self-interest. Rewarding GPs for effort poses no potential for ethical conflict, one might presume, if those efforts which maximise income are also those which maximise patient welfare. Whether or not this is the case, however, depends upon the precise institutional structure of the private incentives. Evidence from the U.S.A., where the market in medical services is well-established, does not inspire confidence on this point. For example, it has been observed that patients to which fixed sums of money are attached are typically "under-treated", both to avoid financial losses on their treatment and to liberate time for the "over-treatment" of fee-for-service patients. The payment of financial inducements from medical suppliers to physicians to use the specific products of the former became so widespread that the practice had to be made formally illegal (Persaud, 1991). With the radial change in the remuneration structure following the new contract, might the emergence of a conflict of interest between private gain and patient welfare be predicted for GPs in the U.K.? For example, would the willingness of GPs to provide a service formerly provided as part of their normal responsibilities now be contingent upon the level of fee offered?

Summarising, the re-organisation of U.K. public health care since 1990 has both strengthened two forms of incentive and made the need to meet dual objective functions more apparent. First, with the arrival of budgets, GPs face the dual objectives of financial discipline and patient management. Second, with the arrival of paying-for-doing, GPs face the dual objectives of patient management and private income generation.

GENERAL PRACTITIONERS' VIEWS

In 1992, the BMA "recognised the inevitability of rationing of health services as an unfortunate fact of life" (Sommerville, 1993, p. 303) and resolved to involve itself actively in the debate over how rationing and resource allocation should take place. It argued that rationing decisions would, of necessity, involve full and complete consultation involving all parties. Rather than commit itself to any one allocation model, the BMA put forward a number of alternatives for debate. A recent qualitative study has suggested, as might be predicted intuitively, that GPs do indeed feel a tension between their capacity to ration and their personal relationship with patients (Ayres, 1996). However, the attitudes of individual physicians specifically in relation to the BMA's rationing and resource allocation agenda do not appear to have been investigated as yet.

Method

We sought to identify and describe attitudes towards the BMA agenda by undertaking a survey of the views of GPs in one English health authority. In the spring of 1996, an anonymous postal questionnaire was sent to the senior partner of each of the 105 general practices in Lincolnshire. The principal purpose was to elicit responses to 25 propositions or attitudinal statements. Opinions were to be recorded along five-point scales, reflecting whether the respondent strongly disagreed with the statements, disagreed, was unsure or neutral, agreed or strongly agreed, the responses being coded 1 through 5, respectively. In addition, GPs were invited to append written comments, under the heading: "Please outline what you consider to be the main problems facing general practice in the future".

With two exceptions, each of the 25 statements was constructed to reflect a specific point raised in the most recent BMA ethics handbook (Sommerville, 1993). These two exceptional statements were derived explicitly from a health economist's conceptualisation of ideal types of the doctor-patient relationship (Williams, 1988). It should be stressed that the BMA views the contents of its handbook as a guide to, rather than a "gold standard" of, ethical conduct. Thus the study was not designed to enquire whether GPs were actually ethical in any objective sense. However, it seemed to us essential to root our attitudinal statements in the handbook's resource allocation and rationing agenda, on the grounds that this agenda is likely to represent the closest approximation to an accepted professional consensus on matters of concern. Prior to mailing, the questionnaire was piloted for feasibility on a small sample of GPs in Nottingham.

RESULTS

Seventy completed questionnaires were returned, implying a response rate of exactly two-thirds. The survey results are presented in Table 1, the statements appearing in the same order as on the original questionnaire. The statement reference code (denoted "Ref." in the table) refers to the section of the BMA ethics handbook (Sommerville, 1993) in which this issue is raised, the two exceptional propositions being denoted "W". For each statement, response frequencies are reported, together with the mean, median and standard deviation of the response scores. Although not technically appropriate

Table 1. Questionnaire responses and summary statistics

No.	Ref.		Frequencies					Summary statistics		
			Strongly disagree, 1 (%)	Disagree, 2 (%)	Neutral, 3 (%)	Agree, 4 (%)	Strongly agree, 5 (%)	Mean	Median	SD
1	10.2.5	A practice should include the views of patients when making decisions about what services to provide.	2 (3)	7 (10)	23 (33)	32 (46)	6 (9)	3.5	4	0.90
2	12.4.1	As they have contributed more to the NHS through national insurance contributions and taxation, GPs should give older patients preference when providing health care.	16 (23)	36 (51)	15 (21)	1 (1)	2 (3)	2.1	2	0.87
3	12.2.1	If a practice or health authority budget is insufficient to provide care for all the patients that need it, it is appropriate that care for some patients be delayed by using waiting lists.	10 (14)	14 (20)	8 (11)	34 (49)	4 (6)	3.1	4	1.22
4	W	The patient should give the doctor all the information the doctor needs so that the doctor can decide what health care the patient needs.	2 (3)	8 (11)	10 (14)	28 (40)	22 (31)	3.9	4	1.08
5	7.5.1.4	When a patient is referred for private treatment, the patient should be able to choose the more expensive option if they prefer it, because they are paying for the treatment.	0 (0)	15 (21)	14 (20)	27 (39)	14 (20)	3.6	4	1.04
6	7.4.2	A GP should recommend the purchase of the over-the-counter version of a drug if it is cheaper than the prescription charge, rather than writing a prescription for the patient.	2 (3)	1 (1)	6 (9)	38 (54)	23 (33)	4.1	4	0.85
7	10.2.4	The new contract for GPs introduced in 1990 is fair as it moves towards a remuneration system that rewards effort, rather than seniority.	29 (41)	21 (30)	13 (19)	6 (9)	1 (1)	2.0	2	1.04
8	7.4.1	Good quality prescribing takes into account the value for money of the medicines prescribed and not just their appropriateness, effectiveness and safety of treatment for the patient.	2 (3)	9 (13)	8 (11)	40 (57)	11 (16)	3.7	4	0.98
9	12.1.4.1	It is the government's duty to provide the finance necessary to meet all the health needs of the population.	6 (9)	14 (20)	12 (17)	24 (34)	14 (20)	3.4	4	1.25
10	12.2.1	If a practice or HA budget is insufficient to meet the health care needs of the whole of the practice's list, care should not be prioritised, but existing services should be spread more thinly across patients.	12 (17)	40 (57)	10 (14)	8 (11)	0 (0)	2.2	2	0.86

11	7.5.1.1	It is a GP's duty to ensure that patients receive the night visits they need, regardless of how much the government pays GPs for providing night visits.	14 (20)	16 (23)	8 (11)	23 (33)	9 (13)	3.0	3	1.38
12	7.4.1	A GP should provide a patient with a more expensive prescribed drug if the patient demands it, even if that drug is no better than a cheaper alternative.	33 (47)	27 (39)	4 (6)	5 (7)	1 (1)	1.8	2	0.95
13	10.2.6	Budgets should not be introduced into general practice, as it is not the job of GPs to ration health care.	7 (10)	17 (24)	10 (14)	16 (23)	20 (29)	3.4	4	1.38
14	7.5.2.1	Practices have a right to remove high cost patients from their lists.	19 (27)	30 (43)	12 (17)	4 (6)	5 (7)	2.2	2	1.13
15	7.6.2	The prescribing of expensive drugs by hospital consultants causes problems for GPs, who have to contain prescribing costs within the budget limits set by the local HA.	2 (3)	6 (9)	9 (13)	28 (40)	29 (41)	4.0	4	1.05
16	12.1.2	It is a GP's duty to take the cost-effectiveness of treatment into account when recommending a treatment or referring a patient to hospital.	2 (3)	14 (20)	12 (17)	34 (49)	8 (11)	3.5	4	1.03
17	W	The doctor is there to give the patient the information that the patient needs to decide what health care to seek.	2 (3)	3 (4)	10 (14)	41 (59)	14 (20)	3.9	4	0.88
18	12.3.4	Rationing of prescribed drugs should take the form of individual clinical decisions as part of the GP-patient relationship, rather than depending on whether the practice has over/under-spent its prescribing budget	3 (4)	1 (1)	5 (7)	46 (66)	15 (21)	4.0	4	0.86
19	12.2.1	If a practice or health authority budget cannot provide the necessary care for a patient, the patient's GP should recommend private treatment.	9 (13)	21 (30)	23 (33)	14 (20)	3 (4)	2.7	3	1.06
20	12.1.2	Under the present remuneration system, there is no incentive for GPs to be cost-effective.	4 (6)	19 (27)	22 (31)	20 (29)	5 (7)	3.0	3	1.04
21	12.3.4.2	When providing care, doctors should not favour their own patients at the expense of other doctors' patients.	3 (4)	14 (20)	6 (23)	25 (36)	12 (17)	3.4	4	1.12
22	10.2.4.1	If a GP thinks that a health promotion clinic is not effective (but will have no harmful effect on patients), the practice can still run the clinic if the government pays it for so doing.	3 (4)	12 (17)	25 (36)	26 (37)	4 (6)	3.2	3	0.95
23	10.2.4.2	Pressure should not be placed on patients to join a screening programme, even if this means that the practice fails to meet its screening targets.	3 (4)	17 (24)	13 (19)	31 (44)	6 (9)	3.3	4	1.07
24	7.4.1	Prescribing a more expensive drug is unethical unless it can be expected to produce a superior outcome, such as larger health gain or better patient compliance.	4 (6)	3 (4)	11 (16)	42 (60)	12 (17)	3.8	4	0.98
25	12.2.1	When a practice or health authority budget is insufficient to meet a patient's needs, a practice should discourage the patient from seeking care.	35 (50)	31 (44)	3 (4)	1 (1)	0 (0)	1.6	1	0.65

for categorical data, the standard deviation serves as a convenient indicator of consensus amongst respondents, lower deviations representing higher degrees of consensus. For reference, the lowest standard deviation, 0.65, was associated with statement 25, whilst the highest, 1.38, was recorded for statements 11 and 13. The median standard deviation was 1.04, recorded for statements 5, 7 and 20. To avoid confusion with other text references, statement numbers are prefixed with a "Q" in the ensuing discussion. Although it is evident that many of the statements individually touch on a number of ethical themes, we discuss the findings under separate headings to facilitate exposition.

Prescribing and cost-effectiveness

The prescribing of drugs is a major component of the GP's strategy of care delivery and a number of the questions focused explicitly on this issue. Responses were broadly consistent. A majority of the sample accepted the need to obtain value for money in prescribing (Q8), although the extent to which obtaining cost-effectiveness in treatment more generally constituted a duty (Q16) received slightly weaker support. Most respondents (86%) rejected the prescription of medication more expensive but no more effective simply on the basis of patient request (Q12) and 77% believed that the prescription of more expensive drugs, with no concomitant health gains, was unethical (Q24). On the basis of the responses to Q6, it is evident that most GPs felt that recommendation to purchase was preferable to prescription when cheaper, over-the-counter substitutes were available. This statement attained the highest mean score overall and the second-lowest standard deviation. Although the ethics of such a policy continue to be debated within the medical profession (Bradley and Bond, 1995), the strategy does have government approval on the grounds that it offers patients increased choice, reduces the financial burden on the NHS and, most obviously, lowers costs to patients (Proprietary Association of Great Britain, 1995).

Q13 specifically addressed the issue of the virtues of the introduction of budgets into general practice and produced the highest polarity in response. However, and given the reality of both prescribing and practice budgets, there was overwhelming agreement that the practice's budgetary position should not be influential in determining the appropriate volume of prescribed drugs, Q18 (second-highest mean score and third-lowest standard deviation). In spite of the BMA's statement that the removal of "uneconomic" patients from a GP's list purely on cost grounds is unethical, 30% of respondents failed to register disapproval of the practice (Q14). Although not technically an ethical question, only 12% of respondents disagreed with the proposition that the prescribing habits of hospital consultants posed budgetary problems for GPs when the patients were returned to primary care (Q15).

Dealing with patient demand

Using categories derived from a 1992 King's Fund College report 1992 (Heginbotham *et al.,* 1992), the BMA handbook outlines four general methods of dealing with excess patient demand for care services. These are deterrence (discouraging patients from demanding care), deflection (referring patients for care elsewhere), dilution (spreading existing resources more thinly across patients) and delay (the use of waiting lists). In our questionnaire, these four methods were represented by statements 25, 19, 10 and 3, respectively.

From the data presented in Table 1, it is evident that Lincolnshire GPs were strongly opposed to deterrence (Q25). The mean and median scores and the standard deviation, for Q25 were, in each case, the lowest of those recorded amongst all the statements. This statement received the lowest number of neutral responses (3) and only one respondent expressed any degree of approval. The position with respect to dilution appears to be similar, although the views were slightly less extreme: the dilution statement (Q10) recorded the fifth-lowest mean score and the third-lowest standard deviation. Opinions on the merits of deflection (Q19) and delay (Q3) were much more variable, however. The former statement produced the second-highest proportion of neutral responses and an above-average standard deviation, whilst the latter produced the fourth-lowest degree of consensus. It is interesting to note that, although waiting lists have existed since the inception of the NHS, 34% of our sample disapproved of them as a rationing device.

Statement 9 represents, in effect, the antithesis of the cited BMA view on the inevitability of rationing. Whilst the majority of respondents agreed with the proposition that the government has the responsibility to meet all care needs, 29% disagreed and a further 17% were neutral. The statement produced the third-lowest degrees of consensus, measured by standard deviation. The BMA has resolved that denial of treatment on the basis of advanced age is unethical (Sommerville, 1993, p. 303) and we constructed statement 2 to explore GP views on an economic case for positive discrimination in favour of the elderly. As may be seen from the data, this case was rejected by 74% of the sample, the statement producing the fourth-lowest mean score and the fifth-highest degree of consensus.

Relations with patients

Statements 4 and 17 are mirror images, as was intended by Williams' characterisation of the doctor–patient consultation process (Williams, 1988). However, it is evident from the results that it is quite possible for GPs to react positively to both, implying that the optimal consultation is seen as a

two-way flow of information between, in essence, equal partners. GPs are somewhat more circumspect, however, in their beliefs as to the desirability of including patients views in service development (Q1). This statement produced the second-highest proportion of neutral responses, although 55% were positively in favour. The responses to statement 5 suggest that the majority of GPs perceive the canons of cost-effectiveness to be less significant when patients are financing their own treatment. This having been said and whilst the BMA itself suggests there can be "no objection to them [the patients] choosing a more expensive option which they prefer and are willing to pay for" (Sommerville, 1993 p.186), 21% of the sample disagreed with the proposition. Finally, it should be noted that more GPs agreed than disagreed with the proposition that their own patients should not be favoured at the expense of those of others doctors (Q21). However, this statement achieved the sixth-lowest degree of consensus and the fifth-highest proportion of neutral scores, although the proposition is explicit in the BMA handbook (Sommerville, 1993, p. 308).

The 1990 contract and private incentives

As noted earlier, the intention of the 1990 GP Contract was to increase the role of rewards for effort and activity in determining GP income. The majority of our sample disagreed that this was an equitable reform (Q7). Opinion as to whether the prevailing remuneration system encouraged the pursuit of economic efficiency in patient management (Q20) was evidently divided, with 31% of respondents being unsure, 33% disagreeing and 36% agreeing. This particular set of responses is illuminated by three others. First, 43% of the sample appeared content to offer ineffective health care solely on the basis that they were paid for so doing (Q22), although more than one-third were neutral in their responses (the highest proportion of neutral responses amongst all statements). Second, 43% felt that the obligation to provide night visits to patients was *not* independent of the level of GP remuneration (Q11) although, judging by the standard deviation (the highest value recorded), attitudes on this issue were polarised. The remuneration structure for out-of-hours services, it should be noted, had been a prominent political issue in the year prior to the survey (Beecham, 1995a,b). Third, we may infer from the responses to Q23 that 28% of respondents felt it appropriate to actively encourage patient recruitment to screening programmes. Whilst the effect of such encouragement would be to increase the coverage of preventive health care, with the expectation of improvements in patient welfare, the effect would also be to raise the probability of the GP receiving the associated target payments.

Associations between responses

A Spearman correlation analysis of the replies to the 25 propositions revealed that significant association at the 5% level existed for only 28 of the 300 bivariate combinations of responses. Given that around 15 significant associations would be expected by chance, this result suggests the existence of a very high and perhaps surprising, degree of orthogonality in the data. In view of the general problem of statistical significance when undertaking multiple comparisons, it is appropriate to chose a more stringent level than 5% when assessing significance (Armitage and Berry, 1994). The following seven bivariate correlations were significant at 1% or better.

Support for the principle that GP prescribing should be cost-effective, Q8, was positively correlated with the belief that cost-*in*effective prescribing is unethical, Q24 ($r = 0.31$, $p = 0.010$) and with the belief in the obligation to consider cost-effectiveness in treatment decisions more generally, Q16 ($r = 0.44$, $p = 0.000$). These correlations would seem to signify a consistency in attitude towards cost-effectiveness considerations in decision making. The strength of opinion that it was the government's role to meet all existing health care needs, Q9, was negatively associated with the strength of belief in the use of private treatment as a rationing device, Q19 ($r = -0.33$, $p = 0.005$). This correlation would appear to reflect on GPs' differing perceptions of the NHS as the sole provider of health care services. Agreement with this government role was also positively associated with the belief that patients should not be pressurised into joining screening programmes, Q23 ($r = 0.35$, $p = 0.003$).

Increasing support for the legitimacy of removal of high cost patients from the list, Q14, was positively associated with support for running ineffective, but profitable, health promotion clinics, Q22 ($r = 0.38$, $p = 0.001$). Although neither practice was widely approved of by the sample, this association suggests the existence of a minority of GPs for whom financial and economic matters have assumed a particular importance. The belief in the obligation to consider cost-effectiveness in treatment decisions, Q16, was associated with support for the inclusion of patient views in decision making, Q1 ($r = 0.34$, $p = 0.004$). Finally, an inclination to discriminate in favour of the elderly, Q2, was associated with approval for the use of service dilution in the face of scarcity, Q10 ($r = 0.38$, $p = 0.001$). We suspect that this last result arises from the skews of the two distributions, both propositions being disapproved of by most respondents.

DISCUSSION

The survey evidence presented thus far suggests that, in some areas, GP opinion appears reasonably

homogeneous whilst, in others, opinions are more sharply divided. The highest degrees of consensus, measured as the lowest standard deviations, were evident with respect to opposition to rationing on the basis of either deterrence (Q25) or dilution (Q10), recommending drug purchase if this avoided the patient incurring higher prescription charges (Q6), prescribing decisions not being influenced by the state of the prescribing budget (Q18) and absence of discrimination in favour of the elderly (Q2). At the opposite extreme, divisions of opinion are particularly obvious with respect to the extent to which service provision should depend upon personal remuneration (Q11), the legitimacy of using budgets in general practice (Q13), the extent to which the government is to be held responsible for full health care funding (Q9) and the appropriateness or otherwise of waiting lists as a form of rationing (Q3).

The responses to statements such as Q8, Q12, Q16 and Q24 suggest that some simple notions of cost-effectiveness in clinical decision making are accepted by most GPs. Naturally, we were unable to explore the GPs' interpretations of cost-effectiveness beyond the propositions of the questionnaire and further research would be required to isolate possible variations in interpretation. For example, a recent empirical study of prescribing behaviour has reported that, when presented with cost-effectiveness data pertaining to hypothetical treatment scenarios, clinicians certainly "showed significant cost sensitivity in response... However, this effect was outweighed by their interest in increasing the life expectancy of patients" (Hux *et al.*, 1994 p.200). The authors suggest that "strict cost-effectiveness criteria may be counter-intuitive for clinicians". Instead, the criterion tended to be employed more weakly and became a relevant decision variable only when the cost-effectiveness ratios of alternatives were well-separated.

It is tempting to locate the evidence presented above within one or more of the formalised frameworks of medical ethics which have proliferated within recent years (Gillon, 1994). For example, it has become traditional to argue that medical ethics and the economic procedures for resource allocation are intrinsically at variance with one another (Mooney and McGuire, 1988). The stereotype of ethical medicine is the delivery of all necessary care for the individual patient, irrespective of cost. In contrast, the stereotype of resource allocation from the point of view of the economist is restriction of care to those patients where the ratio of treatment benefits to costs incurred is favourable in relation to alternative potential resource uses. The physician as "welfare accountant" (Gillon, 1988) would be required to discontinue treatment in cases where the cost-benefit ratio becomes poor, even though further health benefits to the individual patient might continue to accrue. This course of action would represent an evident breach of the prime directive of medical ethics in its stereotypical form. An oft-quoted opinion of a New York physician, to the effect that any doctor changing his or her mode of practice on cost rather than on medical grounds "has embarked on the slippery slope of compromised ethics and waffled priorities" (Lowey, 1980), encapsulates the antipathy between the two stereotypes. In similar vein, it has been argued that the introduction of budgets into general practice would be likely to imply that the traditional egalitarian stance of GPs-providing care commensurate with needs and equally to equal needs — will become practically infeasible and must, of necessity, give way to a utilitarian approach (Smith and Morrissy, 1994).

Such theorising notwithstanding, empirical analyses of medical decision making tend to suggest that the matter is far more complicated than the simple juxtaposition of given circumstances to some specific and pre-ordained moral stance. When examined at the level of the individual physician, ethical issues appear to be resolved in ways far more sophisticated, yet essentially more pragmatic (Persaud, 1991; Hoffmaster *et al.*, 1991; Jecker and Berg, 1992; Brewin, 1993; Hoffmaster, 1994). These ways depend upon physicians' and patients' medical, social and economic circumstances and also upon the cultural milieu and prevailing institutional structure in which physicians are operating. We feel that our results are consistent with those of these other empirical studies in that the pattern of responses is complex and defies simplistic classification.

We argued earlier that the 1990 NHS Act brought to prominence financial and economic considerations, with respect to both practice management and private income generation, which were largely absent before. Naturally, it would have been highly desirable to have had available reference data from prior to 1990, in order to evaluate whether the changes in incentive structures had actually been associated with attitudinal shifts on the part of GPs. Unfortunately, none appear to be available, although this lack of evidence is unsurprising; assuming that we are correct in arguing that economic incentives were relatively insubstantial in the earlier period, then their impact would have appeared to be a comparatively uninteresting research question at that time. Therefore, whilst it is clear from our evidence that, in certain cases, the rationing role has been accepted with some degrees of enthusiasm, it is not apparent whether (i) GPs' views have changed through force of circumstance, (ii) such views pre-existed and have now received opportunities for expression or (iii) the existence of dual objectives has given rise to ethical tensions in the minds of individual GPs.

Further light on point (iii) is shed by the qualitative evidence from the survey, as yet unconsidered.

Sixty three of the seventy respondents (90%) took the opportunity to provide additional comments on their perceptions of problems for general practice in the future. The most common observation, mentioned by 40 (63%) of those completing the section, pertained to increasing patient expectations in relation to limited resources. Thus, for example: "some patients expect GPs to be responsible for all their ailments and to be able to help or cure everything", the matter being exacerbated by "years of GPs not taking a strong line on unrealistic and trivial requests". With respect to GP's personal circumstances, 34 respondents (54%) commented unfavourably on prevailing remuneration and workload conditions. Examples ranged from the simple observation: "increasing workload without fair remuneration" to the more graphic "it's back to the pay peanuts, get monkeys scenario". In half of these cases, the pressures imposed by out-of-hours cover were mentioned explicitly whilst, in ten cases (16%), the burden of increased administration was cited as a specific factor in the current workload increase. One third of respondents cited low morale amongst GPs and/or the recruitment of new personnel, as problems facing the profession, for example: "the increasing feeling that no-one really cares about GPs as people and if some burn out, someone else will take their place".

In terms of practical implications of these perceived problems, two respondents volunteered the information that the prevailing circumstances of general practice were causing them to leave the profession. For others, workload was giving rise to "increased stress resulting in ill health and marital disharmony", whilst a particularly vivid picture was painted of the consequences of responsibility for out-of-hours care: "a ridiculous concept at best and very unhealthy indeed. It turns keen GPs into nasty people, uncaring and selfish, too tired and fed up to think straight". Several GPs commented explicitly on that which they took to represent deteriorating GP/patient relations. "Patient/doctor communication and thorough examinations suffer" owing to increased workload. General practice has become "more impersonal in terms of doctor/patient relationships", with the "increasing encroachment of money into the consultation". A more complete description was provided by one respondent:

> My practice would be classed as inner city. There is a high demand by patients who are not well-educated or self-sufficient. We are computerised in order to see large numbers of patients at high speed. This system, although accurate, prevents any real relationship developing between doctor and patient, which reduces the feedback and hence interest in caring for patients. The situation is reflected in the poor take-up of general practice as a career by newly-qualifying doctors, who find the business-efficient methods intimidating and non-vocational. To stay in practice full-time, doctors have to compromise their warm natural instincts and reduce humanitarian standards towards their patients.

Given the novelty and high political profile of fundholding in U.K. general practice, it is perhaps surprising that only three respondents specifically mentioned fundholding as a prevailing problem in general practice. Whilst the rationing role has evidently posed problems for some — "If the government wants us to ration treatment it bloody well should tell the public that's what it wants us to do" — others cited conservatism amongst GPs, for example, the "failure of older GPs to move with the times and face and attack new challenges", as contributing to the perceived imperfections in the system.

We are unaware of any other U.K. research findings directly comparable with our own and thus it is difficult to make judgements about the extent to which the attitudes of our sample are truly representative for U.K. general practice as a whole. The possibility also exists that, as the post-1990 NHS changes were relatively recent and the new structures are still evolving, our survey has simply captured attitudes in transition at a particular point in time. Resolution of the generalisability issue can only occur, however, with the replication of the survey, across both time and space. This having been said, our sample's perceptions of excessive patient demands and dis-satisfaction with working conditions have also been clearly identified in other U.K. studies (Chambers and Belcher, 1993; Myerson, 1993). Moreover, it is instructive to compare our findings with those of a study conducted in Kentucky, U.S.A. (Robillard *et al.*, 1989). Respondents were asked to comment on the frequency of occurrence of 36 ethical problems confronting them on a day-to-day basis in primary care. Two of the most commonly-cited issues concerned patient non-compliance with treatment owing to patients' financial circumstances and over-treatment required by legally-defensible medicine. These problems would appear to be specific to the institutional circumstances of American medicine. However, ranked fifth and sixth and cited by more than two-thirds of respondents, were patients requesting unneeded services and reduction in care quality occasioned by inadequate health care funds. These U.S. concerns seem remarkably similar to those expressed by the Lincolnshire sample, indicating that some generalisability across health care systems may be possible in these respects.

The opinions of GPs with respect to rationing and resourcing, as manifested in this research, need to be set against events in U.K. general practice which have occurred since the survey was undertaken. Primary care in the U.K. is currently in a state of flux. For example, shortly after the survey was undertaken, GPs began debating whether or not to re-define their conditions of service in terms of "core" and "non-core" activities. By implication, their formal responsibilities to the NHS would be defined as "core", with activities defined as "non-

core'' being optional and subject to extra remuneration (General Medical Services Committee, 1996). At the end of 1996, a White Paper (Cm 3390, 1996) outlined the prospect of a new diversity in primary care organisation, including the radical option of a salaried service. The change of government following the general election of 1997 has heralded the likelihood of further policy re-direction, in view of the new government's obvious antipathy to the budgeting schemes introduced under the previous administration (NHS Executive, 1997; Warden, 1997). More specifically, in late-1997, the government rejected BMA demands for a major NHS funding increase and denied the need for rationing health care services (Buckby, 1997). In the light of the evidence presented in this paper, it appears that the debate over the ethical dimensions of resource allocation in the U.K. will intensify.

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REFERENCES

Armitage, P. and Berry, G. (1994) *Statistical Methods in Medical Research*. Oxford, Blackwell Scientific Publications.

Ayres, P. J. (1996) Rationing health care: views from general practice. *Social Science and Medicine* **42,** 1021–1025.

Beecham, L. (1995a) GPs accuse government of propaganda war. *British Medical Journal* **310,** 211–212.

Beecham, L. (1995b) GPs to be balloted on proposals for night visits. *British Medical Journal* **310,** 1087.

Bradley, C. P. and Bond, C. (1995) Increasing the number of drugs available over the counter: arguments for and against. *British Journal of General Practice* **45,** 553–556.

Brewin, T. B. (1993) How much ethics is needed to make a good doctor? *The Lancet* **341,** 161–163.

British Medical Association (1981) *The Handbook of Medical Ethics*. London, BMA.

British Medical Association (1988) *Philosophy and Practice of Medical Ethics*. London, BMA.

Buckby, S. (1997) Government denies NHS rationing need. *Financial Times*, 8 October: 9.

Chambers, R. and Belcher, J. (1993) Work patterns of general practitioners before and after the introduction of the 1990 contract. *British Journal of General Practice* **43,** 410–412.

CM 555 (1989) *Working for Patients*. London, HMSO.

Cm 3390 (1996) *Choice and Opportunity*. London, HMSO.

Ellis, N. and Chisholm, J. (1993) *Making Sense of the Red Book*. Oxford, Radcliffe Medical Press.

General Medical Services Committee (1996) *Core Services: Taking the Initiative*. London, British Medical Association.

Gillon, R. (1988) ''Ethics, economics and general practice''. In *Medical Ethics and Economics in Health Care*, ed. G. Mooney and A. McGuire, pp. 114–134. Oxford, Oxford University Press.

Gillon, R. (ed.) (1994) *Principles of Health Care Ethics*. Chichester, John Wiley and Sons.

Heginbotham, C., Ham, C., Cochraine, M. and Richards, J. (1992) *Purchasing Dilemmas*. London, King's Fund College and Southampton and Hampshire Health Authority.

Hoffmaster, B. (1994) The forms and limits of medical ethics. *Social Science and Medicine* **39,** 1155–1164.

Hoffmaster, C. B., Stewart, M. A. and Christie, R. J. (1991) Ethical decision making by family doctors in Canada, Britain and the United States. *Social Science and Medicine* **33,** 647–653.

Hux, J. E., Levinton, C. M. and Naylor, C. D. (1994) Prescribing propensity: influence of life-expectancy gains and drug costs. *Journal of General Internal Medicine* **9,** 195–201.

Jecker, N. S. and Berg, A. O. (1992) Allocating medical resources in rural America: alternative perceptions of justice. *Social Science and Medicine* **34,** 467–474.

Lowey, E. L. (1980) Cost should not be a factor in medical care. *New England Journal of Medicine* **302,** 697.

Margolis, H. (1982) *Selfishness, Altruism and Rationality*. Cambridge, Cambridge University Press.

Mooney, G. and McGuire, A. (1988) ''Economics and medical ethics in health care: an economic viewpoint''. In *Medical Ethics and Economics in Health Care*, ed. G. Mooney and A. McGuire, pp. 5–22. Oxford, Oxford University Press.

Myerson, S. (1993) The effects of policy change on family doctors: stress in general practice under the new contract. *Journal of Management in Medicine* **7,** 7–26.

NHS Executive (1997) *NHS Priorities and Planning Guidance, 1998/99*. Department of Health, Leeds, EL(97)39.

Persaud, R. D. (1991) What future for ethical medical practice in the new National Health Service? *Journal of Medical Ethics* **17,** 10–18.

Proprietary Association of Great Britain (1995) *OTC Directory 94/95*. London, PAGB.

Robillard, H. M. and High, D. M. *et al.* (1989) Ethical issues in primary health care: a survey of practitioners' perceptions. *Journal of Community Health* **14,** 9–17.

Smith, L. F. P. and Morrissy, J. R. (1994) Ethical dilemmas for general practitioners under the U.K. new contract. *Journal of Medical Ethics* **20,** 175–180.

Sommerville, A. (1993) *Medical Ethics Today: Its Practice and Philosophy*. London, BMJ Publishing Group.

Warden, J. (1997) Ending ''two-tierism'' is top priority for new health secretary. *British Medical Journal* **314,** 1434.

Williams, A. (1988) Health economics: the end of clinical freedom? *British Medical Journal* **297,** 1183–1186.